

LISTING OF CLAIMS

1. – 67. (Cancelled).

68. (Original) A method of determining temperature of an imager chip,
said method comprising:

storing a fabrication process dependent value for an imager chip;

storing at least one chip dependent value representing a measured pixel dark
current reference value and a reference temperature at which said chip dependent
dark current reference value was measured;

measuring a dark current value of a pixel on said chip; and

determining a chip temperature representation based on said measured dark
current value and stored values.

69. (Original) A method of claim 68 further comprising storing said
fabrication process dependent value and said chip dependent value on said chip.

70. – 75. (Cancelled).

76. (Original) A method of determining temperature of an imager device,
said method comprising:

acquiring at least one dark current signal from at least one pixel in a pixel array; and

determining a temperature value using said acquired dark current signal together with a fabrication process value, and at least one other value representing a reference dark current signal of a pixel of said pixel array taken at a reference temperature.

77. (Original) A method as in claim 76 wherein said at least one other value is an imager chip dependent value.

78. (Original) A method as in claim 76 further comprising storing said dark current signal and said reference temperature at said imager device.

79. (Original) A method as in claim 76 wherein said chip dependent value is stored at said imager device.

80. (Original) A method of claim 76 further comprising correcting at least one temperature dependent parameter of said imager device using said temperature value.

81. (Original) A method of claim 80 wherein said parameter is a current.

82. (Original) A method of claim 80 wherein said parameter is a resistance.

83. (Original) A method of claim 80 wherein said parameter is a voltage.

84. (Original) A method of claim 81 wherein said parameter is an impedance.

85. (Original) A method of claim 80 wherein said parameter is a capacitance.

86. (Currently Amended) A method of determining temperature of an imager chip, said method comprising:

storing a fabrication process dependent value for an imager chip;

acquiring at least one dark current signal at a plurality of locations of a pixel array; and

determining an associated temperature value for each of said locations using a respective said at least one dark current signal and said fabrication process dependent value.

87. (Original) A method as in claim 86 further comprising respectively adjusting each of a plurality of temperature dependent parameters of said imager based on an associated said temperature value.

88. (Original) A method as in claim 87 wherein said parameters comprise a current.

89. (Original) A method as in claim 87 wherein said parameters comprise an impedance.

90. (Original) A method as in claim 87 wherein said parameters comprise a resistance.

91. (Original) A method as in claim 87 wherein said parameters comprise a voltage.

92. (Original) A method as in claim 87 wherein said parameters comprise a capacitance.

93. (Original) A method of determining an imager chip temperature comprising:

sampling a dark pixel signal with a first integration time;

sampling a second dark pixel signal with a second integration time;

providing a calibrated dark pixel signal using said first and second sampled dark pixel signals; and

calculating a chip temperature using the calibrated dark pixel signal and a fabrication process dependent value related to dark current and temperature, and a chip dependent value related to dark current and temperature.

94. (Original) A method as in claim 93 wherein said fabrication process dependent value is related to temperature dependent dark current behavior of a plurality of imager devices manufactured using the same manufacturing process.

95. – 102. (Cancelled).

103. (Original) A method of determining an imager chip temperature comprising:

sampling a first and second dark pixel signals from each of a plurality of dark pixel clusters, each said cluster sampling comprising:

sampling a first dark pixel signal with a first integration time; and

sampling a second dark pixel signal with a second integration time;

calculating a calibrated dark pixel signal for each dark pixel cluster using said first and second dark pixel signal of each cluster; and

calculating a separate chip temperature for each said dark pixel cluster using a said calibrated dark pixel signal for each said cluster and a fabrication process dependent value related to dark current and temperature, and a chip dependent value.

104. – 112. (Cancelled).